Brontornis

Brontornis is an extinct genus of either anseriforms or giant flightless terror birds (Phorusrhacidae) that inhabited Argentina during the Early to Middle Miocene.[1] Certainly the biggest of the Phorusrhacidae family, it is the largest bird known from the Americas and one of the largest that has ever existed.[2]

Contents

Description

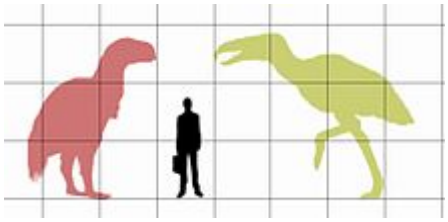
Discovery

Classification

References

Bibliography

Description



Size comparison of Brontornis (red), Kelenken (yellow) and a human

Brontornis had an estimated height of 2.8 m (9 ft 2 in) and its body mass is estimated between 350 and 400 kg (770 and 880 lb). It must have been about 1.75 m (5 ft 9 in) tall at the back. These measures would make *Brontornis* the fifth-heaviest bird found thus far, after *Vorombe titan*, *Dromornis stirtoni* and *Aepyornis maximus*, and *Pachystruthio dmanisensis*.[2]

A comparison of the tarsometatarsi of two *B. burmeisteri* specimens, FM-P13259 and MLP-91 (lectotype), both coming from the same geographical region and geological formation, shows them as not to present any anatomical differences, apart from size, where in the first is around one third smaller than the second. The idea is that they are examples of intraspecific variation, possibly sexual dimorphism. There is the possibility that they represent two species.[2]

Discovery

Brontornis

Temporal range: Early-Mid Miocene (Santacrucian-Laventan) ~17.5–11.6 Ma

Pre€ € O S D C P T J K PgN

Fossil femur

Fossil tarsometatarsus

Scientific classification

Kingdom:	Animalia
Phylum:	Chordata
Class:	Aves
Order:	Cariamiformes
Family:	†Phorusrhacidae
Subfamily:	†Brontornithinae
Genus:	†*Brontornis* Moreno & Mercerat 1891

Type species

†***Brontornis burmeisteri*** Moreno & Mercerat 1891

Synonyms

Genus synonymy

- *Rostrornis* Moreno & Mercerat 1891

Species synonymy

- *Brontornis platyonyx* Ameghino 1895

Life reconstruction

- *Rostrornis floweri* Moreno & Mercerat 1891

Fossils of the terror bird have been found in the Santa Cruz and Monte León Formations in Argentina.[3] It is known from bones, mainly of the legs and feet but also portions of some skulls and backbone, found in several localities of Santa Cruz Province. It coexisted with some slightly smaller and more active phorusrhacids like *Phorusrhacos*.

Classification

Recent work has cast doubt on the hypothesis that *Brontornis* is a phorusrhacid. *Brontornis* may actually represent an anseriform, with other genera traditionally assigned to Brontornithinae (*Physornis* and *Paraphysornis*) being true phorusrhacids. The subfamily containing the latter two had been proposed to be renamed to Physornithinae, with *Physornis fortis* as the type species. If these conclusions are valid, this would mean that there are three groups of giant basal anseriformes, in chronological order of divergence: the gastornithids (*Gastornis* and kin), *Brontornis*, and finally the mihirungs of Australia.[4][5]

However, other analyses have also argued that *Brontornis* exhibits thoracic vertebrae diagnostic of phorusrhacids, supporting its placement within that group.[6]

References

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4. Agnolin, 2007
5. Buffetaut, 2014
6. Alvarenga et al., 2011

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